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National Priority Chemicals Trends Report (2005-2007)

Section 4 Trends Analyses for Specific Priority Chemicals (2005-2007): Priority Chemicals (PCs) Not Reportable to TRI

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Priority Chemicals Not Reportable to TRI

Seven of the 31 PCs are not reported to TRI. In this section, we present data for six of these PCs contained in hazardous wastes, derived from information submitted by facilities in Biennial Reports under RCRA. We derived these data by applying a methodology to estimate the quantity of PACs contained in BR waste streams. The estimates of PCs contained in hazardous wastes provide some perspective regarding the industries that generate and manage wastes that contain these PCs. The focus of this methodology is primary generation activities that includes waste streams generated from a production process, service activity, or routine/periodic cleanup, where potential opportunities for direct waste minimization (e.g., source reduction, recycling) are the greatest. In addition to providing estimated quantities of these PCs contained in hazardous wastes, we also show the CAS number, alternative names, and general uses of each of these PCs (Note: We did not identify any wastes that contained 4-Bromophenyl phenyl ether in the 2007 BR.)

To find more information about these chemicals, please go to the following website:

<http://www.epa.gov/wastes/hazard/wastemin/priority.htm>.

Priority Chemicals (PCs) Not Reported to TRI	
1,2,4,5-Tetrachlorobenzene	Endosulfan, beta-/Endosulfan, alpha
4-Bromophenyl phenyl ether	Fluorene
Acenaphthene	Pyrene
Acenaphthylene	

1,2,4,5-Tetrachlorobenzene

Chemical Information

Alternate Names: benzene tetrachloride, s-tetrachlorobenzene

General Uses: 1,2,4,5-Tetrachlorobenzene is used as an intermediate or building block to make herbicides, insecticides and defoliants. It is also used to make other chemicals, such as 2,4,5-Trichlorophenol and 2,4,5-Trichlorophenoxyacetic acid.

Data Derived From Hazardous Waste Biennial Reports for 1,2,4,5-Tetrachlorobenzene

Based on data derived from the 2007 BR, we estimate that 24 facilities in 14 different NAICS codes generated hazardous wastes, all non-wastewaters, containing approximately 171,000 pounds of 1,2,4,5-tetrachlorobenzene (Exhibit 4.74). Facilities in NAICS code 325199 (All Other Basic Organic Chemical Manufacturing) accounted for 86 percent of the total estimated quantity of 1,2,4,5-tetrachlorobenzene in the hazardous waste streams.

Exhibit 4.74. Estimated Quantity of 1,2,4,5-Tetrachlorobenzene in Hazardous Waste Streams Generated in 2007, by NAICS Code

Primary NAICS Code	NAICS Code Description	Number of Facilities	Quantity (pounds) of 1,2,4,5-tetrachlorobenzene			Percent of Total Quantity
			Wastewaters	Non-Wastewaters	Total Quantity	
325199	All Other Basic Organic Chemical Manufacturing	6	0	147,560	147,560	86.3%
324110	Petroleum Refineries	1	0	19,741	19,741	11.5%
325181	Alkalies and Chlorine Manufacturing	4	0	2,890	2,890	1.7%
325211	Plastics Material and Resin Manufacturing	2	0	459	459	0.3%
325110	Petrochemical Manufacturing	2	0	211	211	0.1%
335999	All Other Miscellaneous Electrical Equipment and Component Manufacturing	1	0	167	167	0.1%
325131	Inorganic Dye and Pigment Manufacturing	1	0	9	9	< 0.1%
481111	Scheduled Passenger Air Transportation	1	0	6	6	< 0.1%
325188	All Other Basic Inorganic Chemical Manufacturing	1	0	5	5	< 0.1%
325412	Pharmaceutical Preparation Manufacturing	1	0	<1	<1	< 0.1%
332813	Electroplating, Plating, Polishing, Anodizing, and Coloring	1	0	<1	<1	< 0.1%
332993	Ammunition (except Small Arms) Manufacturing	1	0	<1	<1	< 0.1%
621498	All Other Outpatient Care Centers	1	0	<1	<1	< 0.1%
928110	National Security	1	0	<1	<1	< 0.1%
Total		24	0	171,048	171,048	100.0%

In 2007, facilities generated hazardous waste containing 1,2,4,5-tetrachlorobenzene in 21 counties within 12 states and territories. Facilities in Brazoria County, Texas (EPA Region 6) generated an estimated 62 percent of the 1,2,4,5-tetrachlorobenzene contained in hazardous wastes (Exhibit 4.75).

Exhibit 4.75. States and Counties in Which Facilities Generated 99 Percent of 1,2,4,5-Tetrachlorobenzene Contained in Primary Generation Hazardous Waste (2007)

EPA Region	State	County	Estimated Quantity of 1,2,4,5-tetrachlorobenzene Contained in Hazardous Wastes (pounds)	Percent of Total Quantity of 1,2,4,5-tetrachlorobenzene Contained in Hazardous Wastes
6	TX	Brazoria	105,399	61.6%
6	TX	San Patricio	19,888	11.6%
6	TX	Nueces	19,741	11.5%
6	LA	Iberville	19,443	11.4%
6	TX	Harris	2,645	1.5%
6	LA	Calcasieu	1,807	1.1%
Total			168,923	98.8%

Exhibit 4.76 shows how facilities reported managing hazardous wastes that contain 1,2,4,5-tetrachlorobenzene. For example, facilities reclaimed/recovered hazardous wastes containing an estimated 95,000 pounds of 1,2,4,5-tetrachlorobenzene and incinerated an estimated 58,000 pounds of 1,2,4,5-tetrachlorobenzene. See Appendix E for a full list of the BR management codes and their descriptions.

Exhibit 4.76. Methods Used to Manage Hazardous Wastes Containing 1,2,4,5-Tetrachlorobenzene (2007)

Management Method Group	Management Method Code Description	Quantity of 1,2,4,5-tetrachlorobenzene Managed (2007)	Percent of Total Estimated Quantity of 1,2,4,5-tetrachlorobenzene
Reclamation and Recovery	Other recovery or reclamation for reuse	74,912	43.3%
	Energy recovery at this site	19,253	11.1%
	Fuel blending prior to energy recovery at another site	357	0.2%
Reclamation and Recovery Total		94,522	54.6%
Destruction or Treatment Prior to Disposal at Another Site	Incineration	58,176	33.6%
Destruction or Treatment Prior to Disposal at Another Site Total		58,176	33.6%
Disposal	Landfill or surface impoundment that will be closed as landfill	18,468	10.7%
Disposal Total		18,468	10.7%
Transfer Off Site	Storage, bulking, and/or transfer off site	1,954	1.1%
Transfer Off Site Total		1,954	1.1%
Grand Total		173,120	100.0%

4-Bromophenyl Phenyl Ether

Chemical Information

Alternate Names: 1-bromo-4-phenoxybenzene, 4-bromodiphenyl ether, p-bromodiphenyl ether, 4-bromophenoxybenzene, 4-bromophenyl phenyl ether

General Uses: 4-Bromophenyl phenyl ether is primarily used for research purposes. In the past, it was used as a flame retardant.

Data Derived From Hazardous Waste Biennial Reports for 4-Bromophenyl Phenyl Ether

Based on data derived from the 2007 BR, we did not identify any hazardous wastes streams that contained 4-Bromophenyl phenyl ether.

Acenaphthene

Chemical Information

Alternate Names: 1,2-dihydroacenaphthene, 1,2-dihydroacenaphthylene, 1,8-ethylenenaphthalene, ethylene naphthalene, naphthyleneethylene, peri-ethylenenaphthalene

General Uses: Acenaphthene is used to make dyes, plastics and pesticides.

Data Derived From Hazardous Waste Biennial Reports for Acenaphthene

Based on data derived from the 2007 BR, we estimate that 211 facilities in 20 different industries (NAICS codes) generated hazardous wastes containing approximately 92,000 pounds of acenaphthene (Exhibit 4.77). Facilities in four of the NAICS codes accounted for 99.9 percent of the total estimated quantity of acenaphthene in the hazardous waste streams; facilities in NAICS code 32110 (Sawmills and Wood Preservation) accounted for approximately 98 percent.

Exhibit 4.77. Estimated Quantity of Acenaphthene in Hazardous Waste Streams Generated, by NAICS Code (2007)

Primary NAICS Code	NAICS Code Description	Number of Facilities	Quantity (pounds) of Acenaphthene			Percent of Total Quantity
			Wastewaters	Non-Wastewaters	Total Quantity	
321110	Sawmills and Wood Preservation	52	1,919	88,791	90,710	98.3%
324110	Petroleum Refineries	124	<1	1,240	1,240	1.3%
113110	Timber Tract Operations	1	0	168	168	0.2%
327390	Other Concrete Product Manufacturing	1	0	139	139	0.2%
Total		178	1,919	90,338	92,257	99.9%

In 2007, facilities in 153 counties within 41 states generated hazardous waste containing acenaphthene. Facilities in 23 counties generated an estimated 95 percent of the acenaphthene contained in hazardous wastes (Exhibit 4.78).

Exhibit 4.78. States and Counties in Which Facilities Generated 95 Percent of Acenaphthene Contained in Primary Generation Hazardous Waste (2007)

EPA Region	State	County	Estimated Quantity of Acenaphthene Contained in Hazardous Wastes (pounds)	Percent of Total Quantity of Acenaphthene Contained in Hazardous Wastes
6	LA	Caddo	22,220	24.1%
3	WV	Hampshire	22,060	23.9%
6	TX	Angelina	4,255	4.6%
5	IN	Pike	4,250	4.6%
4	KY	Todd	4,056	4.4%
6	TX	Grimes	3,018	3.3%
6	AR	Pulaski	2,773	3.0%
6	TX	Jasper	2,753	3.0%
2	NJ	Burlington	2,304	2.5%
6	LA	Rapides	2,273	2.5%
9	AZ	Pinal	2,072	2.2%
4	SC	Florence	2,052	2.2%
10	OR	Lane	1,935	2.1%
8	CO	Adams	1,823	2.0%

Exhibit 4.78. States and Counties in Which Facilities Generated 95 Percent of Acenaphthene Contained in Primary Generation Hazardous Waste (2007) (Continued)

EPA Region	State	County	Estimated Quantity of Acenaphthene Contained in Hazardous Wastes (pounds)	Percent of Total Quantity of Acenaphthene Contained in Hazardous Wastes
4	MS	Stone	1,599	1.7%
6	OK	Pushmataha	1,222	1.3%
3	VA	Salem City	1,080	1.2%
5	IL	Knox	1,055	1.1%
6	AR	Pope	1,045	1.1%
3	PA	Juniata	1,000	1.1%
3	PA	Lycoming	977	1.1%
10	OR	Wasco	846	0.9%
4	AL	Blount	640	0.7%
Total			87,308	94.6%

Exhibit 4.79 shows how facilities reported managing hazardous wastes that contain acenaphthene. For example, facilities transferred off site for storage/bulking hazardous wastes containing an estimated 34,000 pounds of acenaphthene and reclaimed an estimated 23,000 pounds of acenaphthene using fuel blending prior to energy recovery at another site. See Appendix E for a full list of the BR management codes and their descriptions.

Exhibit 4.79. Methods Used to Manage Hazardous Wastes Containing Acenaphthene (2007)

Management Method Group	Management Method Code Description	Quantity of Acenaphthene Managed (2007)	Percent of Total Estimated Quantity of Acenaphthene
Transfer Off Site	Storage, bulking, and/or transfer off site	33,858	35.5%
Transfer Off Site Total		33,858	35.5%
Reclamation and Recovery	Fuel blending prior to energy recovery at another site	23,281	24.4%
	Energy recovery at this site	4,413	4.6%
	Other recovery or reclamation for reuse	1,273	1.3%
	Reclamation and Recovery Total	28,967	30.4%
Destruction or Treatment Prior to Disposal at Another	Other treatment	15,224	16.0%
	Incineration	8,043	8.4%
	Sludge treatment and/or dewatering	455	0.5%
	Stabilization or chemical fixation prior to disposal at another site	202	0.2%
	Chemical oxidation	2	<0.1%
	Cyanide destruction with or without precipitation	<1	<0.1%
	Biological treatment with or without precipitation	<1	<0.1%
	Macro-encapsulation prior to disposal at another site	<1	<0.1%
	Phase separation	<1	<0.1%
Destruction or Treatment Prior to Disposal at Another Site Total		23,926	25.1%
Disposal	Landfill or surface impoundment that will be closed as landfill	6,540	6.9%
	Discharge to sewer/POTW or NPDES	1,905	2.0%
	Land treatment or application	38	<0.1%
	Deepwell or underground injection	<1	<0.1%
Disposal Total		8,483	8.9%
NA	NA	18	<0.1%
NA Total		18	<0.1%
Grand Total		95,252	100.0%

Acenaphthylene

Chemical Information

Alternate Names: 1,2-dehydroacenaphthalene

General Uses: Acenaphthylene is used to make dyes, plastics and pesticides.

Data Derived From Hazardous Waste Biennial Reports for Acenaphthylene

Based on data derived from the 2007 BR, we estimate that nine facilities in three different NAICS codes generated hazardous wastes, all non-wastewaters, containing approximately 35,000 pounds of acenaphthylene (Exhibit 4.80). Facilities in NAICS code 331111 (Iron and Steel Mills) accounted for 57 percent of the total estimated quantity of acenaphthylene in the hazardous waste streams.

Exhibit 4.80. Estimated Quantity of Acenaphthylene in Hazardous Waste Streams Generated in 2007, by NAICS Code

Primary NAICS Code	NAICS Code Description	Number of Facilities	Quantity (pounds) of Acenaphthylene			Percent of Total Quantity
			Wastewaters	Non-Wastewaters	Total Quantity	
331111	Iron and Steel Mills	5	0	19,894	19,894	57.0%
221210	Natural Gas Distribution	1	0	13,646	13,646	39.1%
324199	All Other Petroleum and Coal Products Manufacturing	3	0	1,381	1,381	4.0%
Total		9	0	34,921	34,921	100.0%

In 2007, facilities generated hazardous waste containing acenaphthylene in eight counties within six states. Facilities in three counties generated an estimated 85 percent of the acenaphthylene contained in hazardous wastes (Exhibit 4.81).

Exhibit 4.81. States and Counties in Which Facilities Generated 98 Percent of Acenaphthylene Contained in Primary Generation Hazardous Waste (2007)

EPA Region	State	County	Estimated Quantity of Acenaphthylene Contained in Hazardous Wastes (pounds)	Percent of Total Quantity of Acenaphthylene Contained in Hazardous Wastes
5	IN	Marion	13,646	39.1%
5	IN	Lake	8,451	24.2%
5	OH	Trumbull	7,689	22.0%
5	IL	Madison	2,222	6.4%
4	KY	Boyd	1,458	4.2%
3	PA	Westmoreland	701	2.0%
3	PA	Allegheny	680	1.9%
3	WV	Brooke	74	0.2%
Total			34,921	100.0%

Exhibit 4.82 shows how facilities reported managing hazardous wastes that contain acenaphthylene. For example, facilities used stabilization or chemical fixation for hazardous wastes containing an estimated 15,400 pounds of acenaphthylene, incinerated hazardous wastes containing approximately 9,900 pounds and disposed of approximately 9,800 pounds of acenaphthylene in landfills or surface impoundments. See Appendix E for a full list of the BR management codes and their descriptions.

Exhibit 4.82. Methods Used to Manage Hazardous Wastes Containing Acenaphthylene (2007)

Management Method Group	Management Method Code Description	Quantity of Acenaphthylene Managed (2007)	Percent of Total Estimated Quantity of Acenaphthylene
Destruction or Treatment Prior to Disposal at Another Site	Stabilization or chemical fixation prior to disposal at another site	15,354	43.8%
	Incineration	9,887	28.2%
Destruction or Treatment Prior to Disposal at Another Site Total		25,241	71.9%
Disposal	Landfill or surface impoundment that will be closed as landfill	9,800	27.9%
Disposal Total		9,800	27.9%
Transfer Off Site	Storage, bulking, and/or transfer off site	47	0.1%
Transfer Off Site Total		47	0.1%
Grand Total		35,088	100.0%

Endosulfan, beta-/Endosulfan, alpha (Endosulfan)

Chemical Information

Alternate Names: hexachloro-5-norbornene-2,3-dimethanol, cyclic sulfite

General Uses: Endosulfan is used as an insecticide on crops. It has not been produced in the United States since 1982, but it has been used to make other chemicals.

Data Derived From Hazardous Waste Biennial Reports for Endosulfan, beta-/Endosulfan, alpha (Endosulfan)

Based on data derived from the 2007 BR, we identified less than one pound of endosulfans contained in hazardous wastes streams.

Fluorene

Chemical Information

Alternate Names: 2,2-methylenebiphenyl, 2,3-benzindene, o-biphenylenemethane, 9H-fluorene, alpha-diphenylenemethane-9H-fluorene, diphenylenemethane

General Uses: Fluorene is used to make dyes, plastics and pesticides.

Data Derived From Hazardous Waste Biennial Reports for Fluorene

Based on data derived from the 2007 BR, we estimate that 189 facilities in 19 different NAICS codes generated hazardous wastes, primarily non-wastewaters, containing approximately 107,000 pounds of fluorene (Exhibit 4.83). Facilities in NAICS code 321114 (Wood Preservation) accounted for 89 percent of the total estimated quantity of fluorene in the hazardous waste streams.

Exhibit 4.83. Estimated Quantity of Fluorene in Hazardous Waste Streams Generated in 2007, by NAICS Code

Primary NAICS Code	NAICS Code Description	Number of Facilities	Quantity (pounds) of Fluorene			Percent of Total Quantity
			Wastewaters	Non-Wastewaters	Total Quantity	
321114	Wood Preservation	33	205	95,009	95,214	88.8%
324110	Petroleum Refineries	131	32	10,200	10,231	9.5%
Total		164	237	105,209	105,445	98.4%

In 2007, facilities generated hazardous waste containing fluorene in 131 counties within 39 states. Facilities in Caddo County, Louisiana (EPA Region 6) and Hampshire County, West Virginia (EPA Region 3) each generated an estimated 21 percent of the fluorene contained in hazardous wastes (Exhibit 4.84).

Exhibit 4.84. States and Counties in Which Facilities Generated 80 Percent of Fluorene Contained in Primary Generation Hazardous Waste (2007)

EPA Region	State	County	Estimated Quantity of Fluorene Contained in Hazardous Wastes (pounds)	Percent of Total Quantity of Fluorene Contained in Hazardous Wastes
6	LA	Caddo	22,447	20.9%
3	WV	Hampshire	22,277	20.8%
6	TX	Angelina	4,297	4.0%
5	IN	Pike	4,292	4.0%
4	KY	Todd	4,096	3.8%
4	SC	Florence	4,039	3.8%
10	OR	Lane	3,799	3.5%
8	CO	Adams	3,455	3.2%
6	LA	Rapides	3,445	3.2%
6	TX	Grimes	3,047	2.8%
6	AR	Pulaski	2,800	2.6%
6	TX	Jasper	2,780	2.6%
2	NJ	Burlington	2,327	2.2%
9	AZ	Pinal	2,093	2.0%
Total			85,193	79.5%

Exhibit 4.85 shows how facilities reported managing hazardous wastes that contain fluorene. For example, facilities transferred off site (for storage/bulking) hazardous wastes containing an estimated 40,000 pounds of fluorene and used fuel blending for an estimated 27,000 pounds of fluorene. See Appendix E for a full list of the BR management codes and their descriptions.

Exhibit 4.85. Methods Used to Manage Hazardous Wastes Containing Fluorene (2007)

Management Method Group	Management Method Code Description	Quantity (pounds) of Fluorene Managed (2007)	Percent of Total Estimated Quantity of Fluorene
Transfer Off Site	Storage, bulking, and/or transfer off site	40,133	36.2%
Transfer Off Site Total		40,133	36.2%
Reclamation and Recovery	Fuel blending prior to energy recovery at another site	27,301	24.6%
	Energy recovery at this site	5,883	5.3%
	Other recovery or reclamation for reuse	2,698	2.4%
	Metals recovery	<1	<0.1%
	Solvents recovery	<1	<0.1%
Reclamation and Recovery Total		35,883	32.3%
Destruction or Treatment Prior to Disposal at Another Site	Other treatment	15,375	13.9%
	Incineration	9,006	8.1%
	Sludge treatment and/or dewatering	629	0.6%
	Stabilization or chemical fixation prior to disposal at another site	220	0.2%
	Phase separation	20	<0.1%
	Chemical oxidation	9	<0.1%
	Biological treatment with or without precipitation	3	<0.1%
	Macro-encapsulation prior to disposal at another site	2	<0.1%
Destruction or Treatment Prior to Disposal at Another Site Total		25,264	22.8%
Disposal	Landfill or surface impoundment that will be closed as landfill	9,455	8.5%
	Discharge to sewer/POTW or NPDES	201	0.2%
	Land treatment or application	43	<0.1%
	Deepwell or underground injection	<1	<0.1%
Disposal Total		9,699	8.7%
NA	NA	24	<0.1%
Transfer Off Site Total		24	<0.1%
Grand Total		111,003	100.0%

Pyrene

Chemical Information

Alternate Names: benzo[def]phenanthrene, beta-pyrene

General Uses: Pyrene is used to make dyes, plastics and pesticides. It is also used to make benzo(a)pyrene.

Data Derived From Hazardous Waste Biennial Reports for Pyrene

Based on data derived from the 2007 BR, we estimate that 272 facilities in 45 different NAICS codes generated hazardous wastes, all non-wastewaters, containing approximately 368,000 pounds of pyrene. Facilities in three industries: NAICS code 325192 (Cyclic Crude and Intermediate Manufacturing), NAICS code 321114 (Wood Preservation), and NAICS code 32411 (Petroleum Refineries) accounted for 88 percent of the total estimated quantity of pyrene in the hazardous waste streams (Exhibit 4.86).

Exhibit 4.86. Estimated Quantity of Pyrene in Hazardous Waste Streams Generated in 2007, by NAICS Code

Primary NAICS Code	NAICS Code Description	Number of Facilities	Quantity (pounds) of Pyrene			Percent of Total Quantity
			Wastewaters	Non-Wastewaters	Total Quantity	
325192	Cyclic Crude and Intermediate Manufacturing	5	0	132,868	132,868	36.1%
321114	Wood Preservation	54	3,048	110,795	113,843	30.9%
324110	Petroleum Refineries	139	1,597	76,761	78,358	21.3%
331312	Primary Aluminum Production	15	5,635	10,736	16,371	4.4%
325188	All Other Basic Inorganic Chemical Manufacturing	3	0	13,667	13,667	3.7%
325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing	1	3,997	420	4,417	1.2%
Total		217	14,277	345,247	359,524	97.6%

In 2007, facilities generated hazardous waste containing pyrene in 187 counties within 45 states and territories. Facilities in Jefferson County, Alabama (EPA Region 4) generated an estimated 36 percent of the pyrene contained in hazardous wastes (Exhibit 4.87).

Exhibit 4.87. States and Counties in Which Facilities Generated 80 Percent of Pyrene Contained in Primary Generation Hazardous Waste (2007)

EPA Region	State	County	Estimated Quantity of Pyrene Contained in Hazardous Wastes (pounds)	Percent of Total Quantity of Pyrene Contained in Hazardous Wastes
4	AL	Jefferson	131,017	35.6%
6	LA	Caddo	23,440	6.4%
3	WV	Hampshire	23,145	6.3%
6	LA	East Baton Rouge	14,262	3.9%
6	TX	Jefferson	9,191	2.5%
4	MS	Grenada	5,825	1.6%
6	TX	Harris	5,305	1.4%
6	TX	Brazoria	4,841	1.3%
9	CA	Contra Costa	4,610	1.3%
6	TX	Angelina	4,472	1.2%
5	IN	Pike	4,459	1.2%
6	LA	Lafayette	4,417	1.2%
4	KY	Todd	4,256	1.2%
6	LA	St Bernard	4,110	1.1%
5	OH	Lucas	3,718	1.0%
5	OH	Columbiana	3,589	1.0%

Exhibit 4.87. States and Counties in Which Facilities Generated 80 Percent of Pyrene Contained in Primary Generation Hazardous Waste (2007) (Continued)

EPA Region	State	County	Estimated Quantity of Pyrene Contained in Hazardous Wastes (pounds)	Percent of Total Quantity of Pyrene Contained in Hazardous Wastes
9	CA	Los Angeles	3,559	1.0%
6	LA	St James	3,487	0.9%
6	OK	Kay	3,244	0.9%
6	LA	Rapides	3,202	0.9%
10	OR	Lane	3,176	0.9%
6	TX	Grimes	3,166	0.9%
5	IL	Crawford	3,005	0.8%
4	GA	Chatham	2,997	0.8%
6	AR	Pulaski	2,909	0.8%
6	TX	Jasper	2,888	0.8%
4	MS	Stone	2,753	0.7%
8	CO	Adams	2,732	0.7%
4	SC	Florence	2,613	0.7%
6	TX	Galveston	2,563	0.7%
Total			292,948	79.6%

Exhibit 4.88 shows how facilities reported managing hazardous wastes that contain pyrene. For example, facilities used fuel blending for hazardous wastes containing an estimated 165,000 pounds of pyrene and disposed of hazardous wastes in a landfill or surface impoundment containing an estimated 39,000 pounds of pyrene. See Appendix E for a full list of the BR management codes and their descriptions.

Exhibit 4.88. Methods Used to Manage Hazardous Wastes Containing Pyrene (2007)

Management Method Group	Management Method Code Description	Quantity of Pyrene Managed (2007)	Percent of Total Estimated Quantity of Pyrene
Reclamation and Recovery	Fuel blending prior to energy recovery at another site	165,364	44.7%
	Other recovery or reclamation for reuse	14,714	4.0%
	Metals recovery	14,550	3.9%
	Energy recovery at this site	14,296	3.9%
	Solvents recovery	<1	<0.1%
Reclamation and Recovery Total		208,924	56.5%
Destruction or Treatment Prior to Disposal at Another Site	Incineration	29,985	8.1%
	Other treatment	16,891	4.6%
	Stabilization or chemical fixation prior to disposal at another site	4,285	1.2%
	Sludge treatment and/or dewatering	4,194	1.1%
	Chemical oxidation	4,156	1.1%
	Phase separation	991	0.3%
	Biological treatment with or without precipitation	210	0.1%
	Cyanide destruction with or without precipitation	45	<0.1%
	Macro-encapsulation prior to disposal at another site	5	<0.1%
Destruction or Treatment Prior to Disposal at Another Site Total		60,764	16.4%
Transfer Off Site	Storage, bulking, and/or transfer off site	49,201	13.3%
Transfer Off Site Total		49,201	13.3%
Disposal	Landfill or surface impoundment that will be closed as landfill	39,013	10.5%
	Deepwell or underground injection	4,021	1.1%
	Discharge to sewer/POTW or NPDES	3,028	0.8%
	Land treatment or application	3,012	0.8%
Disposal Total		49,074	13.3%
NA	NA	2,088	0.6%
NA Total		2,088	0.6%
Grand Total		370,051	100.0%